UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,117	09/28/2004	Masaaki Takegami	4633-0126PUS1	1035
	7590 10/09/200 ART KOLASCH & BI		EXAM	IINER
PO BOX 747		NALVEN, EMILY IRIS		EMILY IRIS
FALLS CHUR	CH, VA 22040-0747		ART UNIT	PAPER NUMBER
			3744	
				•
			NOTIFICATION DATE	DELIVERY MODE
			10/09/2007	ELECTRONIC

# Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary    Examiner		Application No.	Applicant(s)
Examiner  3744  3744  3744  ART Unit  Examiner  Examiner		:	
Emily I. Nalven  3744  — The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Extensions for them may be avaisated under the provisions of 37 CR1 1:30(s). In or earth however, may a resy be timely find a district of the communication of 37 CR1 1:30(s). In or earth however, may a resy be timely find a district of the communication of 37 CR1 1:30(s). In or earth however, may a resy be timely find a timely a district of the communication of 37 CR1 1:30(s). In or earth however, may a resy be timely find a timely a timely find the service of the communication. Failure to region with the service of the communication. Failure to replay with the service of the order of the sound will apply and will expire \$(1) (8) (9) (MONTA) from the maining after of this communication. Failure to replay with the service change does not replay and will expire \$(1) (8) (9) (10) (10) (10) (10) (10) (10) (10) (10	Office Action Summary	·	
The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  He period from grip is specified under the providence of 20°CR 1.130(a) in no weart. Nevere, may a reply be timely filed after 50′X (6) MONTHS from the mailing date of this communication.  HE period to grip is specified under the providence and for the communication of the communication of the providence and the providence of the communication.  HE period to grip is specified by the Clifics better than three months after the mailing date of this communication, even if timely filed, may reduce any seamed patter them adjustment. See 37 CFR 1.704(6):  Status  1) ■ Responsive to communication(s) filed on 19 July 2007.  2a) □ This action is FINAL.  2b) □ This dution is FINAL.  2b) □ This providence the providence of the communication of the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) □ Claim(s) 1.5 is/are pending in the application.  4a) Of the above claim(s)	•		
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, RROM THE MAILING DATE OF THIS COMMUNICATION.  Extensions from many be available under the provisions of 37 CFR 1.786(b). In no event, however, may a reply be limitely filled to the control of the c	The MAILING DATE of this communicati		
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  Estations of the many be available under the provisions of 3CPE1.13(s). In one went, may a reply be finedly filed after SIX (6) MONTHS from the mailing date of this communication.  I PND operation reply is specified blow, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  I PND operation reply is application to the mailing date of this communication. I PND operation reply is application to the mailing date of this communication. Available to the mailing date of this communication, even if limitly filed, may reduce any seared patient term adjustment. See 37 CFR 1.704(s).  Status  1) ☑ Responsive to communication(s) filed on 19 July 2007.  2a) ☑ This action is FINAL.  2b) ☑ This action is FINAL.  2b) ☑ This action is FINAL.  2b) ☑ This action is private.  2b) ☑ This action is FINAL.  2b) ☑ This action is private.  2c) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) ☑ Claim(s) ☐ is/are pending in the application.  4a) Of the above claim(s) ☐ is/are withdrawn from consideration.  5) ☐ Claim(s) ☐ is/are rejected.  7) ☐ Claim(s) ☐ is/are rejected.  7) ☐ Claim(s) ☐ is/are rejected.  8) ☐ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on ☐ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a), Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.21(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  3 ☐ Certified copies	Period for Reply		
1) ⊠ Responsive to communication(s) filed on 19 July 2007.  2a ☐ This action is FINAL. 2b ☑ This action is non-final.  3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) ☑ Claim(s) 1-5 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) ☐ Claim(s) 1-5 is/are rejected.  7) ☐ Claim(s) is/are allowed.  6) ☑ Claim(s) 1-5 is/are rejected.  7) ☐ Claim(s) is/are objected to .  8) ☐ Claim(s) is/are objected to .  8) ☐ Claim(s) is/are objected to .  8) ☐ Claim(s) is/are objected to by the Examiner.  10) ☐ The specification is objected to by the Examiner.  Application Papers  9) ☐ The specification is objected to by the Examiner.  Application Papers   9) ☐ The objected to by the Examiner.  Application payre   10 ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Application Papers   9) ☐ The oath or declaration is objected to by the Examiner. Note the drawing(s) is objected to. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d) 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12 ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	WHICHEVER IS LONGER, FROM THE MAIL  - Extensions of time may be available under the provisions of 37 after SIX (6) MONTHS from the mailing date of this communica  - If NO period for reply is specified above, the maximum statutor  - Failure to reply within the set or extended period for reply will, be any reply received by the Office later than three months after the	ING DATE OF THIS COMMUNI CFR 1.136(a). In no event, however, may a stion. y period will apply and will expire SIX (6) MOI by statute, cause the application to become A	CATION. reply be timely filed  NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).
2a) ☐ This action is FINAL. 2b) ☑ This action is non-final.  3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) ☑ Claim(s) 1-6 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) ☐ Claim(s) is/are allowed.  6) ☑ Claim(s) 1-5 is/are rejected.  7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) is/are objected to prestriction and/or election requirement.  Application Papers  9) ☐ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1.☐ Certified copies of the priority documents have been received.  2.☐ Certified copies of the priority documents have been received in Application No  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  *See the attached detailed Office action for a list of the certified copies not received.	Status		
2a) ☐ This action is FINAL. 2b) ☑ This action is non-final.  3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) ☑ Claim(s) 1-6 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) ☐ Claim(s) is/are allowed.  6) ☑ Claim(s) 1-5 is/are rejected.  7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) is/are objected to prestriction and/or election requirement.  Application Papers  9) ☐ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1.☐ Certified copies of the priority documents have been received.  2.☐ Certified copies of the priority documents have been received in Application No  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  *See the attached detailed Office action for a list of the certified copies not received.	1)⊠ Responsive to communication(s) filed or	n <u>19 July 2007</u> .	·
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)			
4) ☐ Claim(s) 1-5 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration.  5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) is/are rejected. 7) ☐ Claim(s) is/are objected to 8) ☐ Claim(s) is/are objected to 8) ☐ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * ○ ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  *See the attached detailed Office action for a list of the certified copies not received.	•		
4a) Of the above claim(s) is/are withdrawn from consideration.  5) □ Claim(s) is/are allowed.  6) ☒ Claim(s) is/are objected to .  8) □ Claim(s) is/are objected to .  8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) □ All b) □ Some * c) □ None of:  1. □ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	Disposition of Claims		
5) ☐ Claim(s) is/are allowed. 6) ☒ Claim(s) is/are rejected. 7) ☐ Claim(s) is/are objected to 8) ☐ Claim(s) is/are objected to 8) ☐ Claim(s) is/are objected to is/are objected to restriction and/or election requirement.  Application Papers  9) ☐ The specification is objected to by the Examiner. 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	4)⊠ Claim(s) <u>1-5</u> is/are pending in the applic	ation.	
6) Claim(s) 1-5 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d) 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some c) None of:  1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	,		
7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d) 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.	5) Claim(s) is/are allowed.		
Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)    Notice of References Cited (PTO-892)	6)⊠ Claim(s) <u>1-5</u> is/are rejected.		
Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d) of the oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  Di Notice of Draftsperson's Patent Drawing Review (PTO-948)  Di Notice of Draftsperson's Patent Drawing Review (PTO-948)  Notice of Informal Patent Application	7) Claim(s) is/are objected to.	•	
9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d) 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  b) Notice of References Cited (PTO-892)  c) Interview Summary (PTO-413)  Paper No(s)/Mail Date  5) Notice of Informal Patent Application	8) Claim(s) are subject to restriction	and/or election requirement.	
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  D Notice of References Cited (PTO-892)  D Notice of Draftsperson's Patent Drawing Review (PTO-948)  D Notice of Informal Patent Application	Application Papers		
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)  D Notice of References Cited (PTO-892)  D Notice of Draftsperson's Patent Drawing Review (PTO-948)  D Notice of Informal Patent Application	9) The specification is objected to by the Ex	caminer.	
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d)  11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.  Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No.  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  Attachment(s)    Interview Summary (PTO-413) Paper No(s)/Mail Date.    Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Paper No(s)/Mail Date.   Notice of Informal Patent Application	•		by the Examiner.
Priority under 35 U.S.C. § 119  12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☐ All b) ☐ Some * c) ☐ None of:  1. ☐ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  **Attachment(s)**  D) ☐ Notice of References Cited (PTO-892)  D) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  D) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date  Notice of Informal Patent Application			
Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  **Attachment(s)  D Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Notice of Information Disclosure Statement(s) (PTO/SB/08)  12 Notice of Informal Patent Application	Replacement drawing sheet(s) including the	correction is required if the drawing	g(s) is objected to. See 37 CFR 1.121(d).
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  **Attachment(s)    Notice of References Cited (PTO-892)			
a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  *Attachment(s)    Notice of References Cited (PTO-892)	Priority under 35 U.S.C. § 119		
2. ☐ Certified copies of the priority documents have been received in Application No  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  *Attachment(s)  1) ☐ Notice of References Cited (PTO-892)  2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date Paper No(s)/Mail Date Notice of Informal Patent Application		oreign priority under 35 U.S.C.	§ 119(a)-(d) or (f).
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  *Attachment(s)    Output	1. Certified copies of the priority doc	uments have been received.	
application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  *Attachment(s)  1) □ Notice of References Cited (PTO-892)  2) □ Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) □ Information Disclosure Statement(s) (PTO/SB/08)  4) □ Interview Summary (PTO-413) Paper No(s)/Mail Date. □ Notice of Informal Patent Application	2. Certified copies of the priority doc	uments have been received in A	Application No
* See the attached detailed Office action for a list of the certified copies not received.  *Attachment(s)    Outline   Notice of References Cited (PTO-892)   Outline   Notice of Draftsperson's Patent Drawing Review (PTO-948)   Outline   Notice of Information Disclosure Statement(s) (PTO/SB/08)   Outline   Notice of Informal Patent Application   Notice   Notice	3. Copies of the certified copies of the	ne priority documents have beer	received in this National Stage
Attachment(s)    Notice of References Cited (PTO-892)	application from the International I	Bureau (PCT Rule 17.2(a)).	
Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO/SB/08)  Notice of Informal Patent Application	* See the attached detailed Office action for	r a list of the certified copies not	received.
Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO/SB/08)  Notice of Informal Patent Application			
Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO/SB/08)  Notice of Informal Patent Application	•		
Paper No(s)/Mail Date  Notice of Draftsperson's Patent Drawing Review (PTO-948)  Information Disclosure Statement(s) (PTO/SB/08)  Paper No(s)/Mail Date  Notice of Informal Patent Application	Attachment(s)	🗖	
(s) ☐ Information Disclosure Statement(s) (PTO/SB/08)  5) ☐ Notice of Informal Patent Application	1) Notice of References Cited (PTO-892)		
	<ol> <li>Notice of Dransperson's Patent Drawing Review (P10-s</li> <li>Information Disclosure Statement(s) (PTO/SB/08)</li> </ol>	5) Notice of	Informal Patent Application
		6)  Other:	<u> </u>

Art Unit: 3744

### **DETAILED ACTION**

### Response to Amendment

Receipt of amendment filed on July 19, 2007 is acknowledged.

## Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by Tanimoto et al. (US Patent No. 6,698,217 B2).

In regard to claim 1, Tanimoto et al. teach a refrigerating apparatus (1) in which a refrigerant circuit which performs a vapor compression refrigerating cycle (col 8 lines 25-29) is provided with an oil return passageway (31) through which refrigerating machine oil separated on the discharge side of the compressors (2A) is injected into the suction side of said compressors (2B, 2C) (see Fig. 1 and col 10 lines 64-657 and col 11 line 1) comprising a liquid injection passageway (10, 27) (see Fig. 1 and col 10 lines 54-55) through which liquid refrigerant is injected into the suction side of said compressors (2A, 2B) (see Fig. 1 and col 9 lines 26-28), wherein said oil return passageway (31) is connected to said liquid injection passageway (27) (see Fig. 1) in which gas refrigerant in said oil return passageway (31) is mixed with said liquid refrigerant prior to injecting into the suction side of said compressors (2A).

Art Unit: 3744

In regard to claim 2, Tanimoto et al. teach a refrigerating apparatus (1) in which a refrigerant circuit which performs a vapor compression refrigerating cycle (col 8 lines 25-29) is provided with a gas injection passageway (15) through which gas refrigerant is injected into the suction side of the compressors (2A, 2B) (see Fig. 1 and col 9 lines 26-30) comprising a liquid injection passageway (10, 27) (see Fig. 1 and col 10 lines 54-55) through which liquid refrigerant is injected into the suction side of said compressors (2A, 2B), wherein said gas injection passageway (15) is connected to said liquid injection passageway (10, 27) (see Fig. 1) in which gas refrigerant in said oil return passageway (31) is mixed with said liquid refrigerant prior to injecting into the suction side of said compressors (2A).

In regard to claim 3, Tanimoto et al. teach the refrigerating apparatus (1) comprising a heat source side unit (4) and utilization side (41, 45, 51) units being connected with one another (see Fig. 1) wherein the degree of superheat of suction refrigerant of said compressors (2A, 2B, 2C) is controlled by adjusting the rate of flow of refrigerant flowing through said liquid injection passageway (10, 27) without operating expansion mechanisms provided in said utilization units (4) (see Fig. 1 and col 10 lines 43-53).

In regard to claim 4, Tanimoto et al. teach the refrigerating apparatus (1) wherein said compressors (2B, 2C) are variable displacement compressors (col 8 lines 48-52) wherein said liquid injection passageway (10, 27) is opened

Art Unit: 3744

whenever the operating capacity of said compressors (2B, 2C) exceeds a predetermined value (col 13 lines 48-52).

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanimoto et al. (US Patent No. 6,698,217 B2) in view of Tanimoto et al. (US Patent Pub No. 2004/0112082).

In regard to claim 5, Tanimoto et al. teach wherein at least one of said compressors (2B, 2C) is deactivated until the operating capacity of said compressors (2B, 2C) but doesn't explicitly teach until it exceeds a predetermined value (col 1 lines 33-36 and col 1 line 67 and col 2 lines 1-23). Tanimoto et al. explicitly teach deactivating a compressor if the capacity becomes to low (para 17 and para 18). It would have been obvious to one of ordinary skill in the art at the time of the invention to deactivate the compressor until it exceeds a predetermined value as taught by Tanimoto et al. (2004/0112082) in the system as taught by Tanimoto et al. (6,698,217) because this improves the efficiency of the system and prevents any wear on the system should a compressor be operating at too low a capacity.

#### Response to Arguments

Art Unit: 3744

Applicant's arguments with respect to claims 1 and 2 have been considered but are most in view of the new ground(s) of rejection.

The applicant contends that Tanimoto et al. do not teach a liquid injection passageway. The examiner takes note that Tanimoto et al. teach the liquid injection passageway as the portion of line 10, near the designation of element 27. As seen in Fig. 1, Tanimoto et al. explicitly teach the liquid injection pipe along line 27 connected with a valve 7c thereby meeting the limitations of claims 1 and 2.

Additionally, the applicant contends that element 8 of Figure 1 does not constitute a gas injection passageway and is simply for discharging gas refrigerant from the compressor. However, as the gas is under high pressure in pipe 8 and is therefore injected through the pipe and then this high pressure gas is put through valve 3A thus meeting the metes and bounds of the claim as a gas injection passageway. Additionally, the examiner agrees that pipe 8 is on the discharge side of the compressor and not the suction side as claimed. However, pipes(15) is connected to the suction side of the compressor and are passageways for gas that is injected into the respective compressors, thus the element now referred to as the gas injection pipe is 15 and not 8.

Additionally, the applicant contends that Kitamoto does not teach a liquid injection passageway connected to the oil return passageway. The examiner Applicant's arguments, see page 7 of Remarks, filed July 19, 2007, with respect to rejection 35 U.S.C. 102(b) have been fully considered and are persuasive. The rejection of Kitamoto teaching a liquid injection passageway connected to the oil return has been withdrawn.

Art Unit: 3744

This action is being made non-final to afford the applicants another opportunity to respond to the claims rejected in the Office Action.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Iris Nalven whose telephone number is 571-272-3045. The examiner can normally be reached on Monday - Thursday 8 AM - 5:30 PM and on alternate Fridays 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors, Cheryl J. Tyler can be reached on 571-272-4834 or Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**Emily Iris Nalven** 

SUPERVISORY PATENT EXAMINER